

WHAT IS CLAIMED IS:

1. A connector comprising:
a housing; and
5 multiple pairs of signal contacts, each two signal contacts that are paired with each other being arranged at a distance in the longitudinal direction of the housing.
- 10 2. The connector as claimed in claim 1, wherein:
the multiple pairs of signal contacts are of a surface mounting type, having bent ends in contact with a pad on a substrate; and
15 the bent ends of all the multiple pairs of signal contacts extend in parallel with one another.
- 20 3. The connector as claimed in claim 1, wherein the multiple pairs of signal contacts are arranged as multiple arrays in the transverse direction of the housing.
- 25 4. The connector as claimed in claim 1, further comprising an array internal ground contact between each neighboring pairs of the multiple pairs of signal contacts.
- 30 5. The connector as claimed in claim 4, wherein the array internal ground contact is large enough to shield the multiple pairs of signal contacts from each neighboring pair.
- 35 6. The connector as claimed in claim 3, further comprising an array intermediate ground contact between each two neighboring arrays of the multiple pairs of signal contacts.

7. The connector as claimed in claim 6,
wherein:

the array intermediate ground contact has an
exposed flat panel part in the housing; and

5 the length of the housing in the longitudinal
direction is greater than the distance between each
pair of signal contacts.

8. The connector as claimed in claim 1,
10 further comprising a shielding layer that is formed on
the exterior of the housing.

9. The connector as claimed in claim 1,
wherein each of the multiple pairs of signal contacts
15 is designed for balanced transmission.

10. A connector comprising:
signal contacts that are arranged in two arrays;
and
20 ground contacts that divide each array of signal
contacts into multiple pairs,
the multiple pairs of signal contacts being
adjacent to one another over the entire length.

25 11. The connector as claimed in claim 10,
wherein substrate contact parts of the multiple pairs
of signal contacts arranged in one of the two arrays
extend in the opposite direction from substrate contact
parts of the multiples pairs of signal contacts
30 arranged in the other one of the two arrays.

12. The connector as claimed in claim 10,
wherein substrate contact parts of the multiple pairs
of signal contacts arranged in one of the two arrays
35 face substrate contact parts of the multiple pairs of
signal contacts arranged in the other one of the two
arrays, all the substrate contact parts extending in

the same direction.

13. The connector as claimed in claim 10,
wherein a pair of signal contacts arranged in one of
5 the two arrays and a pair of signal contacts arranged
in the other one of the two arrays exist between each
two neighboring ground contacts.

14. The connector as claimed in claim 10,
10 wherein a pair of signal contacts arranged in one of
the two arrays and a pair of signal contacts arranged
in the other array that faces the one of the two arrays
via an insulating member exist between each two
neighboring ground contacts.

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15. The connector as claimed in claim 10,
wherein a pair of signal contacts arranged in one of
the two arrays and a pair of signal contacts arranged
in the other array that faces the one of the two arrays
20 via a space exist between each two neighboring ground
contacts.

16. The connector as claimed in claim 10,
wherein the ground contacts each has a panel-like shape,
25 and are provided across both two arrays.

17. The connector as claimed in claim 10,
wherein each of the ground contacts is provided across
both two arrays, and has top ends facing each other.

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18. The connector as claimed in claim 10,
wherein:

each of the ground contacts has a pair of contact
parts;

35 one of the pair of contact parts is aligned with
substrate contact parts of the multiple pairs of signal
contacts arranged in one of the two arrays; and

the other one of the pair of contact parts is aligned with substrate contact parts of the multiple pairs of signal contacts arranged in the other one of the two arrays.

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19. The connector as claimed in claim 10, wherein parts of the signal contacts to be connected to a mating connector extend in a direction perpendicular to parts of the signal contacts to be connected to a substrate.

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20. The connector as claimed in claim 10, wherein parts of the signal contacts to be connected to a mating connector extend in the opposite direction from parts of the signal contacts to be connected to a substrate.

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20. The connector as claimed in claim 10, wherein the signal contacts arranged in the two arrays are aligned at intervals in the longitudinal direction of the connector.

21. The connector as claimed in claim 10, further comprising other signal contacts that are provided in each array,

the other signal contacts in each array are arranged at intervals, without the ground contacts being interposed among the other signal contacts.

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23. An electronic device comprising:
a wiring substrate; and
a connector that is mounted to the wiring substrate,
the connector comprising:
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a housing; and
multiple pairs of signal contacts, each two signal contacts that are paired with each other being

arranged at a distance in the longitudinal direction of the housing.

24. An electronic device comprising:
5 a wiring substrate; and
 a connector that is mounted to the wiring substrate,
 the connector comprising:
 signal contacts that are arranged in two arrays;
10 and
 ground contacts that divide each array of signal contacts into multiple pairs,
 the multiple pairs of signal contacts being adjacent to one another over the entire length.
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